Report of Magnetical Observations at Falmouth Observatory for the Year 1900. Latitude 50° 9′ 0″ N., Longitude 5° 4′ 35″ W.; height, 167 feet above mean sea-level.

The Declination and the Horizontal Force are deduced from hourly readings of the photographic curves, and so are corrected for the diurnal variation.

The results in the following tables, Nos. I, II, III, IV, are deduced from the magnetograph curves, which have been standardised by observations of deflection and vibration. These were made with the Collimator Magnet, marked 66A, and the Declinometer Magnet, marked 66C, in the Unifilar Magnetometer No. 66, by Elliott Brothers, of London. The temperature correction (which is probably very small) has not been applied.

In Table V, H is the mean of the absolute values observed during the month (generally three in number), uncorrected for diurnal variations and for any disturbance. V is the product of H and of the tangent of the Observed Dip (uncorrected likewise for diurnal variation).

In Table VI the Inclination is the mean of the absolute observations, the mean time of which is 3 P.M. The Inclination was observed with the Inclinometer No. 86, by Dover, of Charlton, Kent, and needles 1 and 2, which are $3\frac{1}{2}$ inches in length.

The Declination and the Horizontal Force values given in Tables I to IV are prepared in accordance with the suggestions made in the Fifth Report of the Committee of the British Association on comparing and reducing magnetic observations, and the time given is Greenwich Mean Time, which is 20 minutes 18 seconds earlier than local time.

The following is a list of the days during the year 1900 which were selected by the Astronomer Royal as suitable for the determination of the magnetic diurnal variations, and which have been employed in the preparation of the magnetic tables:—

January ...	3, 8, 9, 30, 31.	February ...	3, 6, 7, 13, 28.
March ...	5, 11, 21, 27, 28.	April... ...	3, 8, 15, 22, 25.
May ...	9, 10, 14, 21, 28.	June	10, 11, 16, 20, 25.
July ...	14, 15, 18, 22, 30.	August ...	6, 9, 10, 23, 30.
September	2, 7, 21, 25, 26.	October ...	2, 7, 13, 19, 31.
November	5, 6, 11, 16, 30.	December	3, 6, 15, 23, 24.

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Magnetic Observer.

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Table I.—Hourly Means of Declination at the Falmouth on Five selected quiet Days in

(18° + West.)

Hours	Mid.	1	2	3	4	5	6	7	8	9	10	11
					Winter.							
1900.	′	′	′	′	′	′	′	′	′	′	′	′
Jan. ..	30·8	30·9	31·2	31·4	31·5	31·3	31·1	30·8	30·4	30·3	30·9	32·0
Feb. ..	30·3	30·5	30·5	30·7	30·8	30·5	30·1	29·8	29·9	29·9	30·4	31·2
March .	29·6	29·7	29·6	29·5	29·3	29·0	28·9	28·3	27·3	26·8	27·6	29·7
*Oct. ..	27·4	28·0	28·2	27·9	27·9	27·8	27·9	27·6	26·7	26·5	26·7	28·7
Nov. ..	25·3	25·6	25·9	26·1	26·0	25·8	25·6	25·2	24·7	24·4	25·5	26·9
Dec. ..	26·8	27·1	27·3	27·4	27·4	27·3	27·1	26·9	26·6	26·6	26·9	27·7
Means	28·4	28·6	28·8	28·8	28·8	28·6	28·5	28·1	27·6	27·4	28·0	29·4
					Summer.							
	′	′	′	′	′	′	′	′	′	′	′	′
April ..	29·2	29·2	29·0	29·0	28·7	28·5	27·9	27·0	26·1	25·8	27·3	30·1
May ..	29·1	29·2	29·2	28·8	28·4	27·5	26·4	25·7	25·4	26·2	28·0	30·0
June ..	28·6	28·5	28·4	28·4	28·2	27·5	26·4	25·9	25·7	25·9	27·6	30·1
July ..	28·5	28·7	28·5	28·1	27·8	26·7	25·6	25·7	25·1	25·2	26·1	28·3
August.	29·0	29·0	28·8	28·8	28·3	27·9	26·8	25·9	25·6	26·6	29·0	31·3
Sept. ..	28·5	28·4	28·5	28·3	28·1	28·0	27·5	26·8	25·8	26·3	28·4	31·3
Means	28·8	28·8	28·7	28·7	28·3	27·7	26·8	26·2	25·6	26·0	27·7	30·2

* Mean of four days—2nd, 7th, 13th, 31st.

Table II.—Diurnal Inequality of the Falmouth

Hours	Mid.	1	2	3	4	5	6	7	8	9	10	11
					Summer mean.							
	′	′	′	′	′	′	′	′	′	′	′	′
	−0·4	−0·4	−0·5	−0·5	−0·9	−1·5	−2·4	−3·0	−3·6	−3·2	−1·5	+1·0
					Winter mean							
	′	′	′	′	′	′	′	′	′	′	′	′
	−0·6	−0·4	−0·2	−0·2	−0·2	−0·4	−0·5	−0·9	−1·4	−1·6	−1·0	+0·4
					Annual mean.							
	′	′	′	′	′	′	′	′	′	′	′	′
	−0·5	−0·4	−0·4	−0·4	−0·6	−1·0	−1·5	−2·0	−2·5	−2·4	−1·3	+0·7

Note.—When the sign is + the magnet points

Observatory, determined from the Magnetograph Curves each Month during 1900.

Noon	1	2	3	4	5	6	7	8	9	10	11	Mid.
					Winter.							
′	′	′	′	′	′	′	′	′	′	′	′	′
33·2	34·0	33·3	32·6	32·1	32·3	31·7	31·1	30·8	30·7	30·8	30·8	30·8
32·5	33·6	33·8	32·6	31·5	31·0	30·7	30·5	30·5	30·1	30·3	30·4	30·7
32·0	33·7	33·8	32·7	31·0	29·7	29·4	29·7	29·7	29·7	29·6	29·6	29·3
31·5	32·8	32·4	31·1	29·4	29·0	28·6	28·4	28·3	27·8	27·8	27·7	28·0
28·0	28·3	27·5	26·4	26·0	25·9	25·6	25·4	25·2	25·1	25·1	25·1	25·4
28·6	28·9	28·6	27·9	27·5	27·1	26·7	26·3	26·3	26·2	26·2	26·1	26·5
31·0	31·9	31·6	30·6	29·6	29·2	28·8	28·6	28·5	28·3	28·3	28·3	28·5
					Summer.							
′	′	′	′	′	′	′	′	′	′	′	′	′
32·5	34·1	34·3	33·0	31·5	30·3	29·7	29·6	29·5	29·4	29·5	29·1	29·0
32·1	33·8	33·6	32·1	30·6	29·6	29·0	28·8	28·8	28·9	29·2	29·2	29·2
33·2	34·2	34·5	33·8	32·6	30·9	29·8	28·9	28·6	28·5	28·3	28·4	28·5
31·7	34·0	34·1	32·6	31·2	30·1	29·2	29·1	29·2	29·0	28·6	28·6	28·3
33·6	34·8	34·0	32·7	30·7	29·4	28·9	29·0	28·9	29·0	29·0	28·9	29·0
34·0	34·6	33·2	31·1	29·4	28·3	28·3	28·8	28·7	28·7	28·7	28·7	28·5
32·9	34·3	34·0	32·6	31·0	29·8	29·2	29·0	29·0	28·9	28·9	28·8	28·8

Declination as deduced from Table I.

Noon	1		3	4	5	6	7	8	9	10	11	Mid.
					Summer mean.							
′	′	′	′	′	′	′	′	′	′	′	′	′
+3·7	+5·1	+4·8	+3·4	+1·8	+0·6	0·0	−0·2	−0·2	−0·3	−0·3	−0·4	−0·4
					Winter mean.							
′	′	′	′	′	′	′	′	′	′	′	′	′
+2·0	+2·9	+2·6	+1·6	+0·6	+0·2	−0·2	−0·4	−0·5	−0·7	−0·7	−0·7	−0·5
					Annual mean.							
′	′	′	′	′	′	′	′	′	′	′	′	′
+2·9	+4·0	+3·7	+2·5	+1·2	+0·4	−0·1	−0·3	−0·4	−0·5	−0·5	−0·6	−0·5

to the west of its mean position.

Table III.—Hourly Means of the Horizontal Force at Falmouth on Five selected quiet Days in

0·18000 + (C.G.S. units).

Hours	Mid.	1	2	3	4	5	6	7	8	9	10	11
					Winter.							
1900.												
Jan. ..	671	670	671	671	673	674	676	677	675	669	663	660
Feb. ..	672	672	672	673	673	674	675	674	673	669	663	662
March .	679	680	679	679	679	679	678	678	675	666	662	657
*Oct. ..	696	696	694	695	697	698	699	698	695	685	676	672
Nov. ..	706	706	706	706	707	708	708	707	703	696	692	694
Dec. ..	701	701	702	703	703	704	704	704	704	703	701	699
Means	688	688	687	688	689	690	690	690	688	681	676	674
					Summer.							
April ..	687	686	686	687	686	686	685	686	683	678	668	665
May ..	687	685	683	683	682	680	676	672	668	666	666	667
June ..	700	699	697	697	698	698	695	692	687	681	675	673
July ..	702	701	699	698	698	697	695	693	687	679	671	672
Aug. ..	701	700	698	698	697	697	693	688	681	673	674	680
Sept. ..	707	705	704	703	704	702	701	697	691	685	681	681
Means	697	696	695	694	694	693	691	688	683	677	673	673

* Mean of four days—2nd, 7th, 13th, 31st.

Table IV.—Diurnal Inequality of the Falmouth

Hours	Mid.	1	2	3	4	5	6	7	8	9	10	11
					Summer mean.							
	+ ·00005	+ ·00004	+ ·00003	+ ·00002	+ ·00002	+ ·00001	− ·00001	− ·00004	− ·00009	− ·00015	− ·00019	− ·00019
					Winter mean.							
	+ ·00002	+ ·00002	+ ·00001	+ ·00002	+ ·00003	+ ·00004	+ ·00004	+ ·00004	+ ·00002	− ·00005	− ·00010	− ·00012
					Annual mean.							
	+ ·00004	+ ·00003	+ ·00002	+ ·00002	+ ·00003	+ ·00003	+ ·00002	·00000	− ·00004	− ·00010	− ·00015	− ·00016

Note.—When the sign is + the reading

Observatory, determined from the Magnetograph Curves each Month during 1900.

Noon	1	2	3	4	5	6	7	8	9	10	11	Mid.
					Winter.							
662	667	671	671	671	670	671	672	674	675	673	673	673
662	664	667	668	669	672	673	673	674	674	674	675	674
662	669	675	679	681	681	681	683	685	684	684	684	685
673	681	688	691	693	695	697	698	699	699	699	699	700
696	699	703	704	705	706	708	708	708	707	705	705	704
699	700	701	703	704	705	705	704	704	703	702	701	701
676	680	684	686	687	688	689	690	691	690	690	690	690
					Summer.							
670	678	687	692	693	691	693	694	695	694	693	692	693
670	673	674	677	680	685	691	694	693	691	691	691	691
678	684	691	700	699	700	704	705	704	703	700	699	699
680	684	689	695	698	698	698	701	702	704	703	703	701
691	697	698	700	700	699	699	704	704	704	703	703	703
688	698	701	702	704	702	704	708	707	707	705	708	706
680	686	690	694	696	696	698	701	701	701	699	699	699

Horizontal Force as deduced from Table III.

Noon	1	2	3	4	5	6	7	8	9	10	11	Mid.
					Summer mean.							
−·00012	−·00006	−·00002	+·00002	+·00004	+·00004	+·00006	+·00009	+·00009	+·00009	+·00007	+·00007	+·00007
					Winter mean.							
−·00010	−·00006	−·00002	·00000	+·00001	+·00002	+·00003	+·00004	+·00005	+·00004	+·00004	+·00004	+·00004
					Annual mean.							
−·00011	−·00006	−·00002	+·00001	+·00003	+·00003	+·00005	+·00007	+·00007	+·00007	+·00006	+·00006	+·00006

is above the mean.

Table V.—Magnetic Intensity. Absolute Observations.
Falmouth Observatory, 1900.

1900.	C.G.S. measure.	
	H or Horizontal force.	V or Vertical force.
January	0·18665	0·43503
February	0·18660	0·43474
March	0·18661	0·43476
April	0·18676	0·43508
May	0·18677	0·43500
June	0·18682	0·43463
July	0·18686	0·43458
August	0·18681	0·43460
September	0·18696	0·43495
October	0·18683	0·43489
November	0·18696	0·43499
December	0·18696	0·43495
Means	0·18680	0·43485

Table VI.—Magnetic Inclination. Absolute Observations.
Falmouth Observatory, 1900.

Month.		Mean.	Month.		Mean.
January	10	66° 46′·8	July	10	66° 43′ 7
	24	66 46·6		20	66 44·4
	31	66 46·7		30	66 43·9
		66 46·7			66 44·0
February	10	66 45·9	August	12	66 43·9
	21	66 46·6		26	66 44·3
	28	66 46·0		31	66 45·0
		66 46·2			66 44·4
March	10	66 46·6	September	13	66 44·4
	21	66 46·6		19	66 44·3
	30	66 45·5			66 44·4
		66 46·2	October	8	66 44·3
April	10	66 47·0		20	66 44·9
	20	66 45·8		22	66 45·0
	28	66 45·5		30	66 46·3
		66 46·1			66 45·1
May	10	66 47·2	November	10	66 45·7
	21	66 45·7		21	66 43·9
	30	66 44·4		29	66 43·8
		66 45·8			66 44·5
June	11	66 44·8	December	11	66 43·5
	20	66 43·6		19	66 45·9
	29	66 44·9		31	66 43·7
		66 44·4			66 44·4